# CommScope Investor Day June 13, 2018

### Our Passion: Shaping communications networks of the future

# Safe Harbor

#### **Caution Regarding Forward Looking Statements**

This presentation or any other oral or written statements made by us or on our behalf may include forward-looking statements that reflect our current views with respect to future events and financial performance. These forward-looking statements are generally identified by their use of such terms and phrases as "intend," "goal," "estimate," "expect," "project," "projections," "plans," "anticipate," "should," "could," "designed to," "foreseeable future," "believe," "think," "scheduled," "outlook," "target," "guidance" and similar expressions, although not all forward-looking statements contain such terms. This list of indicative terms and phrases is not intended to be all-inclusive.

These statements are subject to various risks and uncertainties, many of which are outside our control, including, without limitation, our dependence on customers' capital spending on data and communication systems; concentration of sales among a limited number of customers and channel partners; changes in technology; industry competition and the ability to retain customers through product innovation, introduction and marketing; risks associated with our sales through channel partners; changes to the regulatory environment in which our customers operate; product guality or performance issues and associated warranty claims; our ability to maintain effective management information systems and to successfully implement major systems initiatives; cyber-security incidents, including data security breaches, ransomware or computer viruses; the risk our global manufacturing operations suffer production or shipping delays, causing difficulty in meeting customer demands; the risk that internal production capacity or that of contract manufacturers may be insufficient to meet customer demand or guality standards; changes in cost and availability of key raw materials, components and commodities and the potential effect on customer pricing; risks associated with our dependence on a limited number of key suppliers for certain raw material and components; the risk that contract manufacturers we rely on encounter production, quality, financial or other difficulties; our ability to fully realize anticipated benefits from prior or future acquisitions or equity investments; potential difficulties in realigning global manufacturing capacity and capabilities among our global manufacturing facilities that may affect our ability to meet customer demands for products; possible future restructuring actions; substantial indebtedness and maintaining compliance with debt covenants; our ability to incur additional indebtedness; our ability to generate cash to service our indebtedness; possible future impairment charges for fixed or intangible assets, including goodwill; income tax rate variability and ability to recover amounts recorded as deferred tax assets; our ability to attract and retain gualified key employees; labor unrest; obligations under our defined benefit employee benefit plans may require plan contributions in excess of current estimates; significant international operations exposing us to economic, political and other risks, including the impact of variability in foreign exchange rates; our ability to comply with governmental anti-corruption laws and regulations and export and import controls worldwide; our ability to compete in international markets due to export and import controls to which we may be subject; changes in the laws and policies in the United States affecting trade; cost of protecting or defending intellectual property; costs and challenges of compliance with domestic and foreign environmental laws; risks associated with stockholder activism, which could cause us to incur significant expense, hinder execution of our business strategy and impact the trading value of our securities; and other factors beyond our control. These and other factors are discussed in greater detail in our 2017 Annual Report on Form 10-K. Although the information contained in this presentation represents our best judgment as of the date of this report based on information currently available and reasonable assumptions, we can give no assurance that the expectations will be attained or that any deviation will not be material. Given these uncertainties, we caution you not to place undue reliance on these forward-looking statements, which speak only as of the date made. We are not undertaking any duty or obligation to update this information to reflect developments or information obtained after the date of this report, except as otherwise may be required by law.

#### **Non-GAAP Financial Measures**

CommScope management believes that presenting certain non-GAAP financial measures provides meaningful information to investors in understanding operating results and may enhance investors' ability to analyze financial and business trends. Non-GAAP measures are not a substitute for GAAP measures and should be considered together with the GAAP financial measures. As calculated, our non-GAAP measures may not be comparable to other similarly titled measures of other companies. In addition, CommScope management believes that these non-GAAP financial measures allow investors to compare period to period more easily by excluding items that could have a disproportionately negative or positive impact on results in any particular period. GAAP to non-GAAP reconciliations are included in this presentation.

# Agenda

	6	
lennifer Crawfo	ord, Director Inve	estor Relations
Eddi	e Edwards, Presi	dent and CEO
Get There	Morgan Kurk,	EVP and COO
ectivity	Jaxon Lang, SV	/P Connectivity
	Ben Cardwel	l, SVP Mobility
Peter Karlsson,	, SVP Global Sale	es & Marketing
	Alex Pease	, EVP and CFO
	Eddi Get There ectivity	ectivity Jaxon Lang, SV Ben Cardwel Peter Karlsson, SVP Global Sale



### **COMMSCOPE**<sup>®</sup>

Eddie Edwards

President & Chief Executive Officer

# COMM: Shaping Communications Networks of the Future

<ul> <li>Helping global customers design, build and optimize their wired, wireless, data center and commercial building networks</li> <li>Well positioned to capitalize on key industry trends</li> <li>Differentiated technology (~10,000 patents)</li> <li>Serve a growing ~\$20B - \$25B market</li> </ul>		Operating Segments	Mobility Solutions	<b>Connectivity</b> <b>Solutions</b>
		2017 Revenue % of Total	<b>\$1.8 B</b> 38%	<b>\$2.8 B</b> 62%
A global le Mobility Solutions	<ul> <li>ader in the markets we serve:</li> <li>Radio frequency wireless network connectivity solutions, including metro cell, DAS and small cell solutions</li> </ul>	Global Market Position	<ul> <li>A global leader in fiber connectivity and wireless</li> <li>Preferred partner to our customers</li> <li>Wireline networks</li> <li>Wireless networks</li> <li>Data center networks</li> <li>Commercial building networks</li> </ul>	
Connectivity Solutions	<ul> <li>Connectivity and network intelligence for indoor and outdoor network applications</li> <li>Indoor network solutions for commercial buildings, data centers, central offices &amp; cable television headends</li> <li>Outdoor network solutions for telecom service provider and cable TV networks, including FTTX solutions</li> </ul>	Core Markets		

### Global Presence with Support Customers Can Count On

>**30** global manufacturing and distribution centers

~5,000 installation partners and

hundreds of CommScope customer-care professionals 100+

nations served by 500+ distributors

TOP 100 GLOBAL TECH LEADER

2018

THOMSON REUTERS

#### COMMSCOPE®

INFRASTRUCTURE ACADEMY

Our partners are trained and certified to ensure quality 20,000+

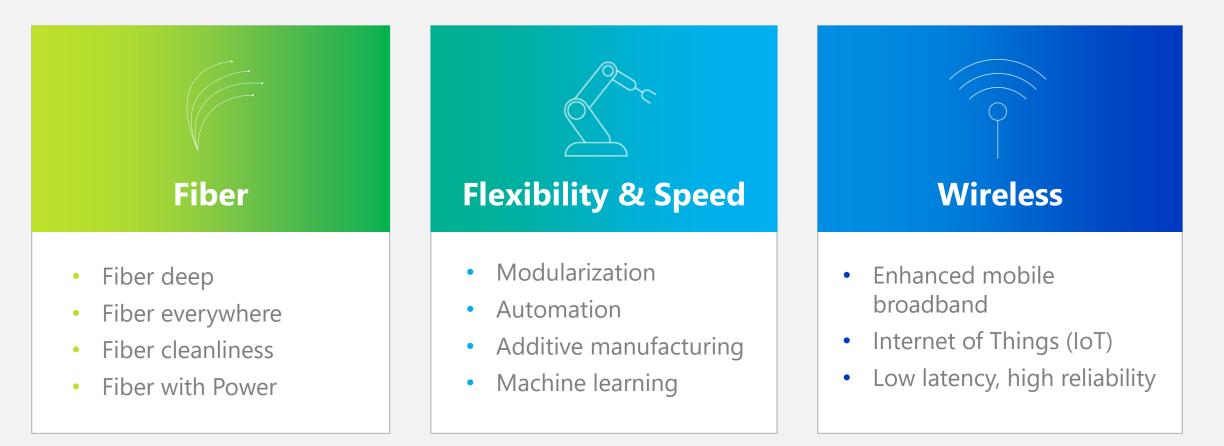
global employees focused on creating the best solutions and delivering the best customer experience

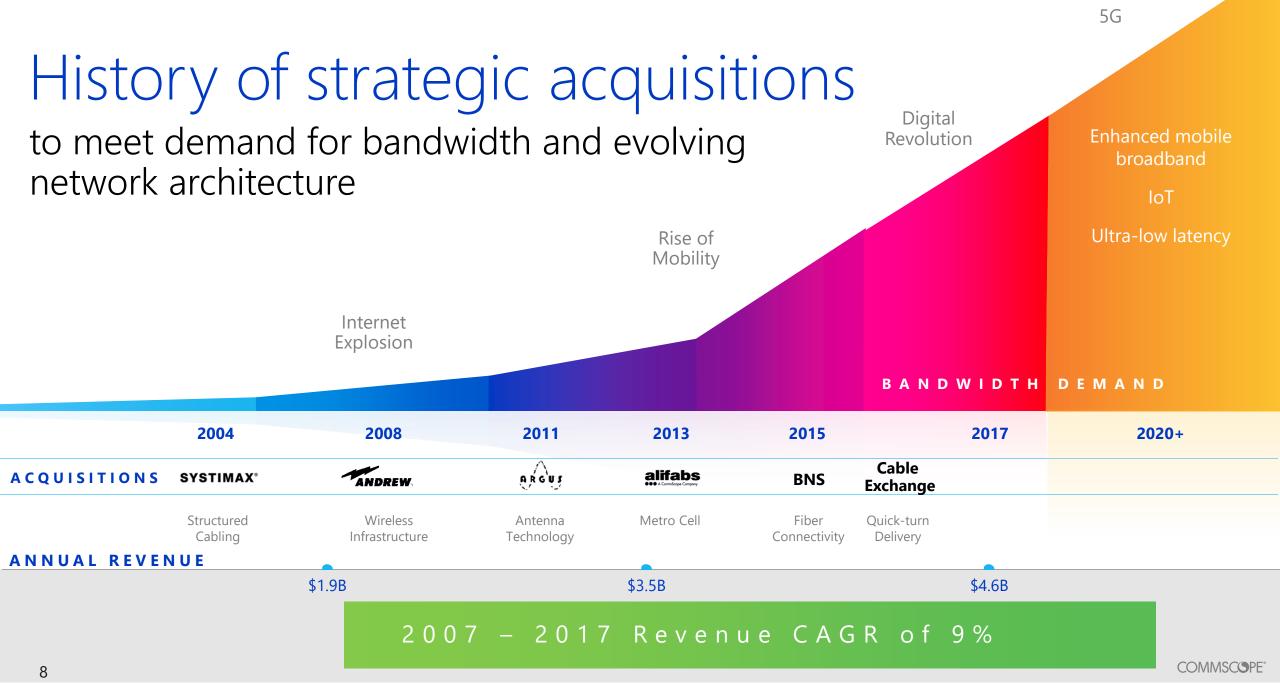


**COMMSCOPE**°

# **Convergence Driving Change**

#### NETWORK ARCHITECTURES ARE CHANGING





#### Powering the Present and Empowering the Future

### **Growth Assessment**

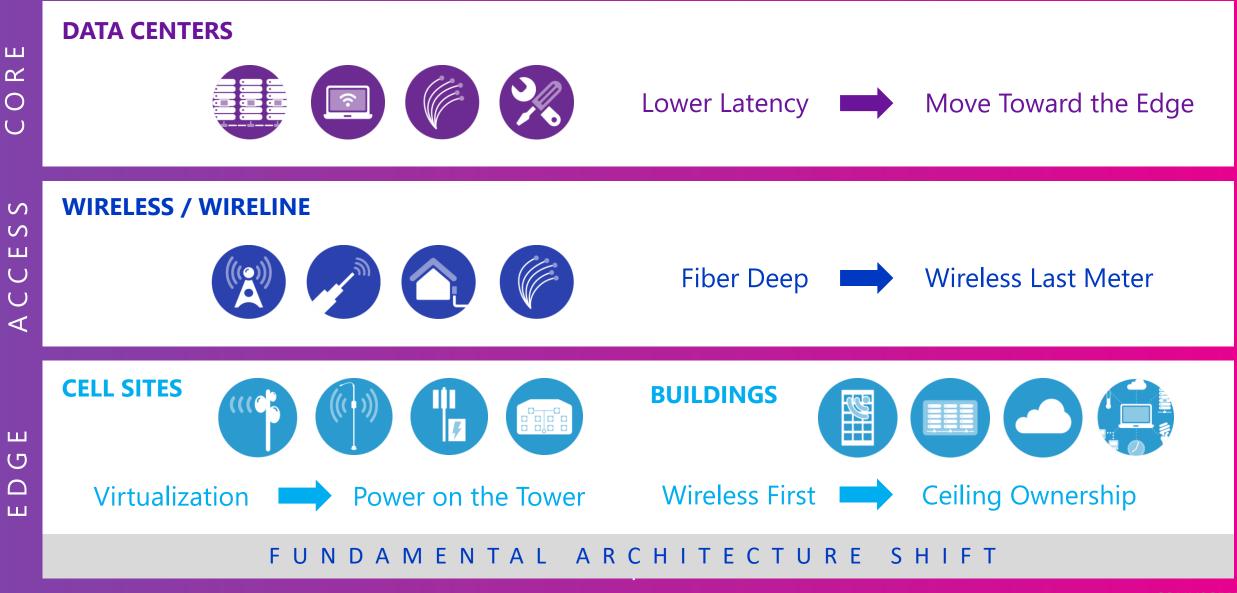
- 1. Drive outsized growth in core markets
- 2. Identify growth opportunities in adjacent markets
- 3. Refine path toward attractive shareholder returns



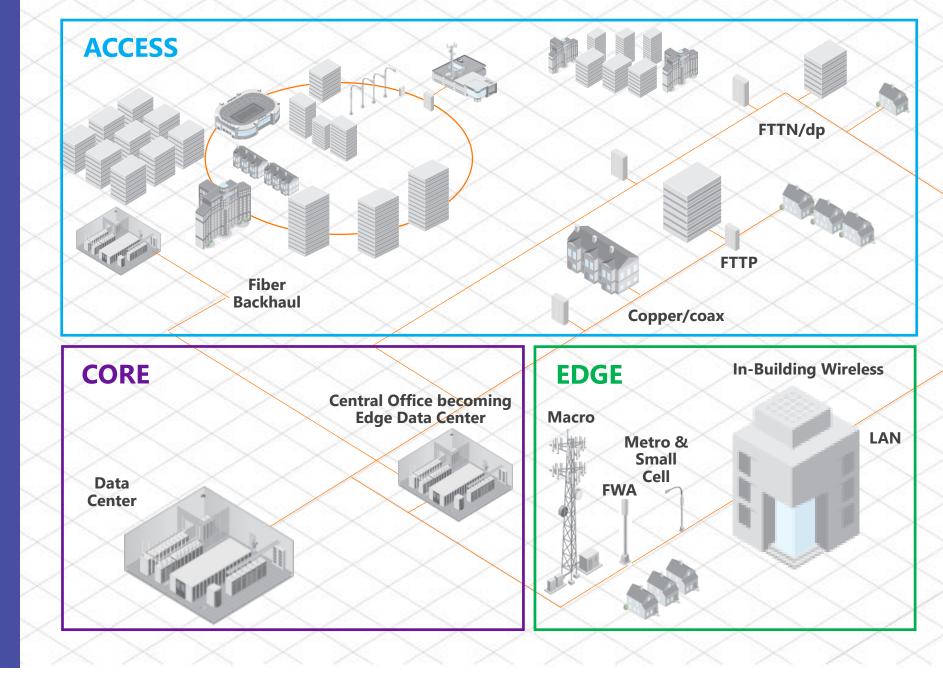
#### Vision for the Future and the expertise to get there

Morgan Kurk EVP and COO

### **Evolution of Network Architectures for Speed and Efficiency**



Network trends align with CommScope strengths



### Global Footprint and Scale: A Competitive Advantage

### **GLOBAL LEADER**

in infrastructure solutions for communications networks

> 20,000 EMPLOYEES

~10,000 PATENTS

~\$200m ANNUAL R&D SPEND

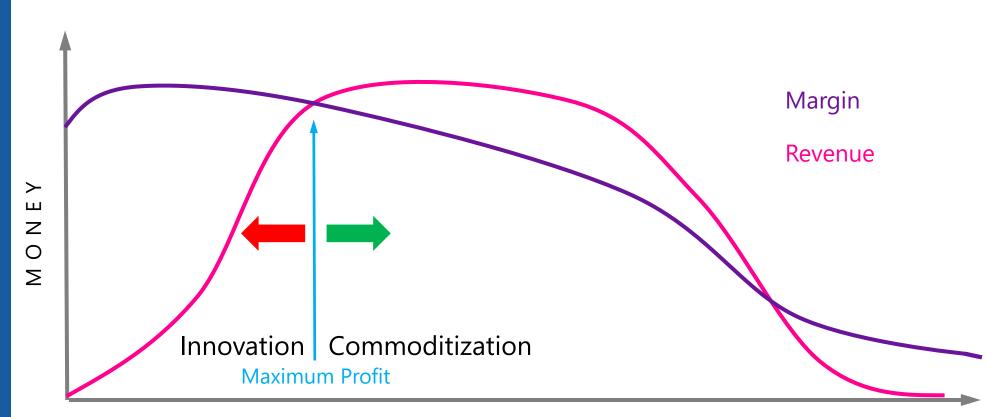
> > 1,100 ENGINEERS

Manufacturing
 Co-located manufacturing and design

Design

# Innovation Matters

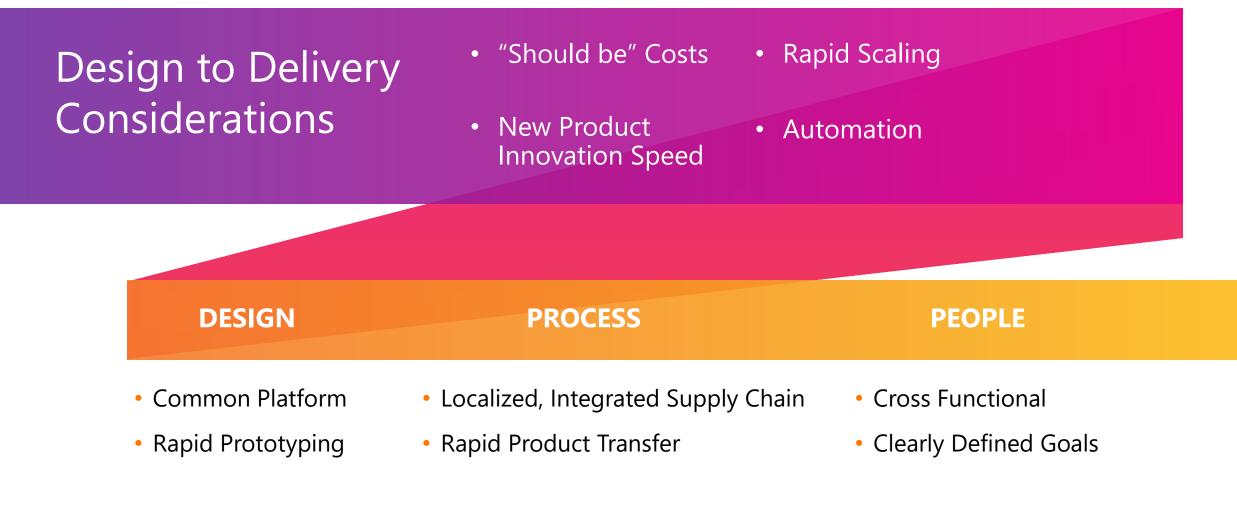
#### MANAGING THE BUSINESS CYCLE



#### INNOVATION

- Thwarts commoditization
- Shortens product life cycle to insulate from pricing pressure
- Reinvigorates the business cycle
- Maximizes profit

# Managing Complexity and Speed



#### **Continuous Cost Improvements**

#### Our vision is to enable the connected lifestyle

#### The CommScope Advantage

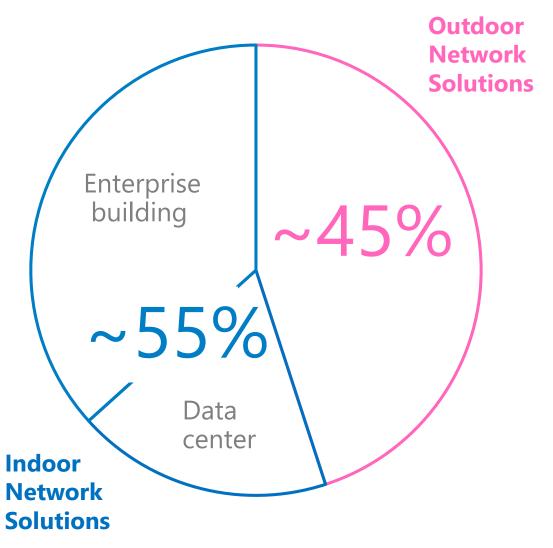
- 1. Technology to address customer needs
- 2. Operational excellence
- 3. Global footprint and scale
- 4. Breadth of product portfolio



### Global Leader in Fiber and Copper Connectivity Solutions

Jaxon Lang SVP Connectivity Solutions

### Connectivity Solutions Global leader in Connectivity for Communications Networks



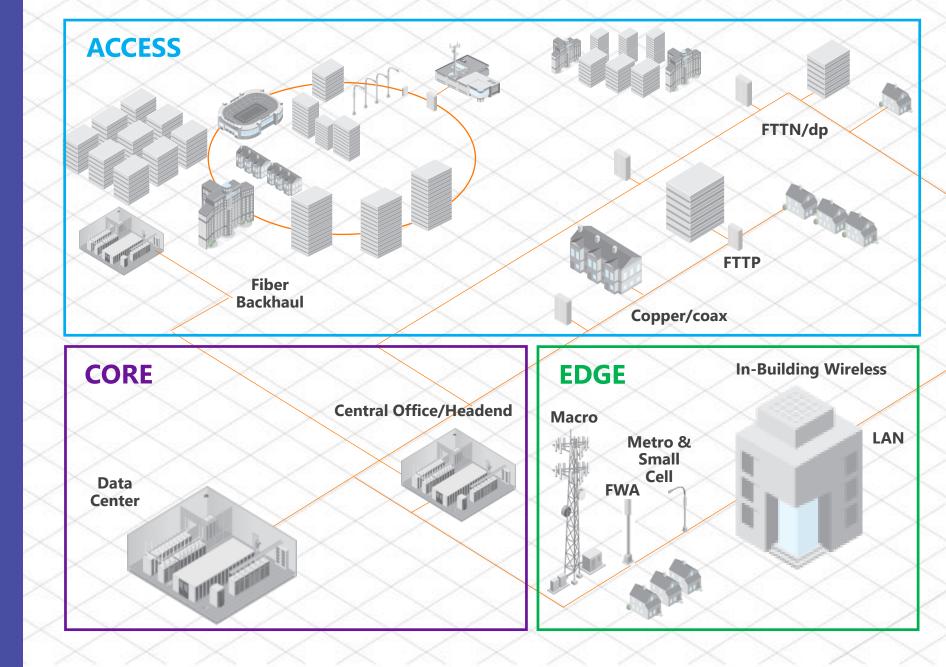
\$2.8B 2017 Revenue 19% 2017 AOI<sup>(1)</sup> margin

~\$12B-\$15B Product Addressable Market

(1) See appendix for reconciliation of non-GAAP measures

Serving the world's largest customers

In every aspect of their communications networks



# Committed to World Class Capabilities



OptiTAP<sup>™</sup> is a trademark of Corning Optical Communications Brands, Inc.





Deep fiber & converged networks

Enterprise dynamics

Hyperscale, cloud & multi-tenant data center expansion

3



- High-speed broadband bandwidth growth
- Wireless densification
- Growing importance of power



# **2** Enterprise dynamics

- Global market leader
- Importance of Power over Ethernet (PoE)
- Grow market position



# Hyperscale, cloud & multitenant data center expansion

- Edge computing
- High density
- Connector innovation



# Key Strategic Programs

#### DRIVING GROWTH

**Data Center Deep** 

Hyperscale, Cloud & MTDC Solutions

**Convergence** Connectivity + Mobility

#### Cable Exchange Global Expansion

Program

Positioning for the future

#### **Horizon Modularity**

Modular Outside Plant Product Redesign

#### **Connector Excellence**

Capability Enhancement & Technology Innovation Operational excellence

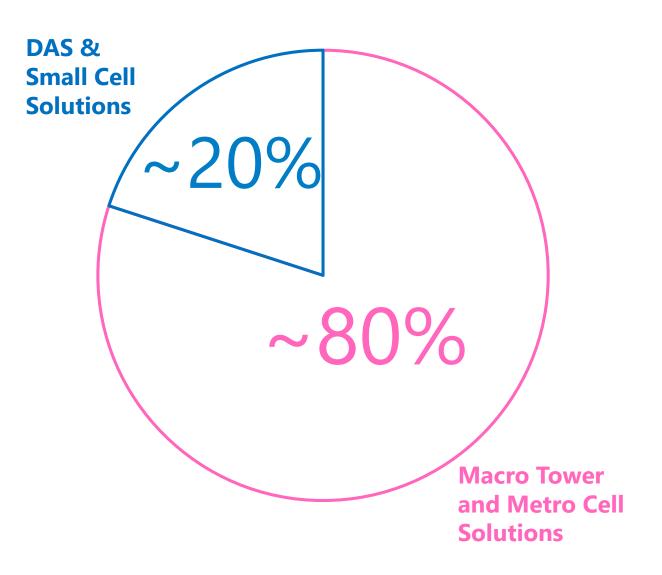
#### IMPROVING COSTS



# Revving up for 5G

Ben Cardwell SVP Mobility Solutions

### Mobility Solutions Global leader in RF wireless network connectivity solutions



\$1.8B 2017 Revenue

20% 2017 AOI<sup>(1)</sup> margin

~\$8B-\$10B

**Product Addressable Market** 

(1) See appendix for reconciliation of non-GAAP measures

The next network evolution is shaping up to be the next revolution

# Enhanced mobile broadband

Internet of Things (IoT)

Ultra-low latency



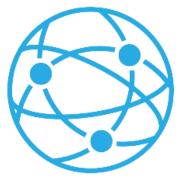
Three Key 5G Strategies



# 1 Densification 2 Virtualization 3 Optimization



# 1 Densification



MORE

BASE STATIONS

INCREASED

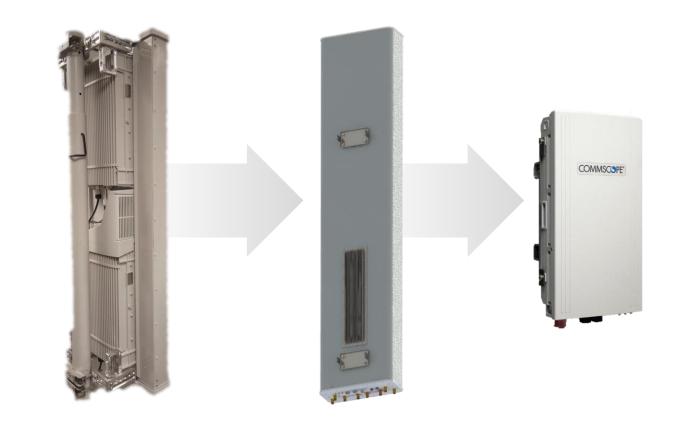
SECTORIZATION

MORE

METRO CELLS

### Intelligent Antenna Platforms for 5G

- Mobility and Fixed Applications
- Paired (FDD) & Unpaired (TDD) Spectrum
- Massive MIMO
- Beam Forming



Radio & Antenna Combination Active & Passive Array Integration **Fully Active** 

### Metro Cell Solutions: Solving the Site Acquisition Challenge





2 Virtualization

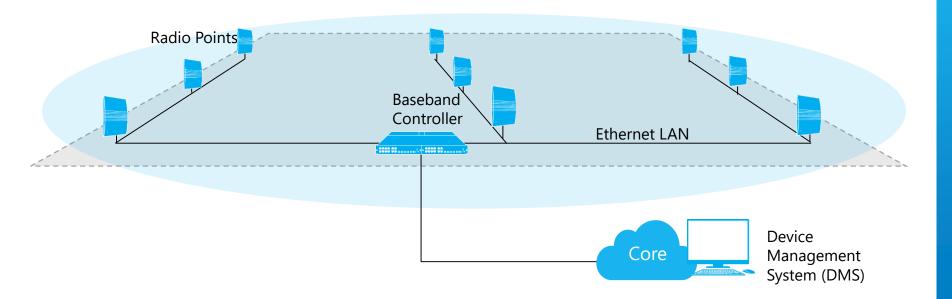
Centralized radio access networks (CRAN)

Network function virtualization (NFV)

Cell virtualization

Mobile edge compute

# In-building CloudRAN with OneCell



#### • Split RAN architecture

- Licensed and unlicensed spectrum
- Ethernet-based fronthaul and backhaul
- Centralized baseband processing with cell virtualization



#### INDUSTRIAL SITES

AIRPORTS & RAILWAY

OFFICES

HOTELS & RESORTS

TS STADIU

STADIUMS/ARENAS





COMPLEX ANTENNAS

SPECTRUM MANAGEMENT

> POWER solutions

# Antenna Complexity Growing Exponentially

#### **Drivers**

- New Spectrum
- Site Acquisition Barriers
- Performance Demands

#### Impacts

- Larger Barrier to Entry
- Shorter Refresh Cycles
- Growing Sales Prices & Profit Dollars



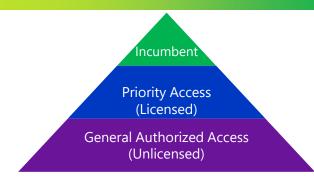
2018



2014

## 5G Solutions Outside of Radio Frequency Domain





- Spectrum Allocation Server (SAS)
- Enhanced Sensor Network (ESC)
- CBRS/3.5GHz Band
   Initially

### **Edge Power**



#### PowerShift

- Intelligent RRH Power Control
- DAS & Small Cell
   Power

#### Convergence



- Metro Cell Backhaul
- CRAN Hubs
- Fixed Wireless Access

## CommScope: Pervasive Across 5G Networks





### Why Customers Choose CommScope

**Peter Karlsson** SVP, Global Sales & Marketing

## Our Total Solution Approach

#### Network Convergence

#### **Content Distribution**

#### Infrastructure Complexity

#### The CommScope Advantage

#### **EXPERTISE**

- RF Network Design & Architecture
- Spectrum Efficiency & Management
- FTTx Networks
- Hardened Fiber Connectivity
- Intelligent Buildings Physical Layer
- Data Center Infrastructure Design

#### **DEDICATED TEAMS**

- Outdoor Cellular
- DAS & Small Cell
- Telecom/MSO
- Enterprise
- Data Centers

## Our Global Reach & Scale



## Trust - A CommScope Core Value

### **Comprehensive Solutions**

### Innovation

### Service & Scale

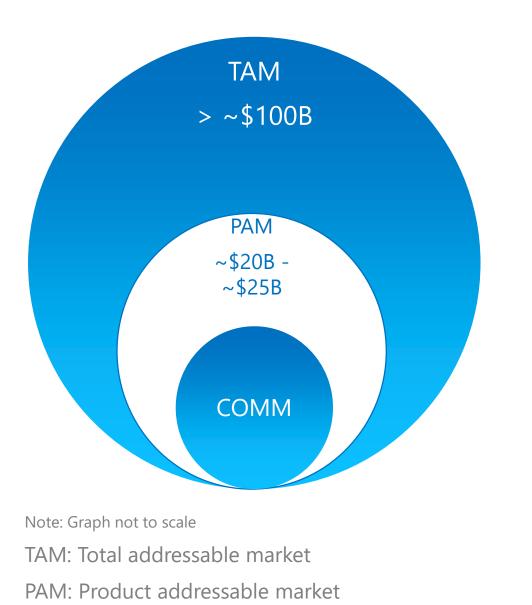
COMMSCOP



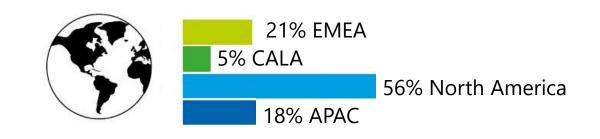
### Solid Financial Foundation

Alex Pease Executive Vice President and Chief Financial Officer

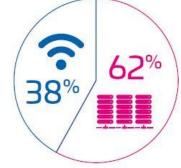
### Who We are: Global Leader in Communications Infrastructure



### 2017 Sales by Geography







## How We Create Value



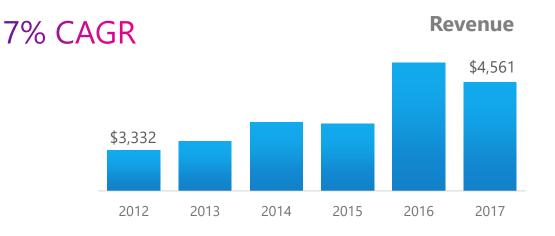
#### Driving value through strategic acquisitions and disciplined capital management

#### Net Leverage

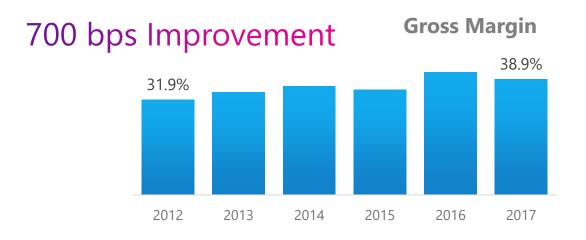


## Our Strong Track Record

(Dollars in millions)

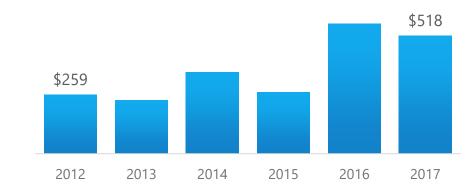


Adjusted Operating Income<sup>(2)</sup> 12% CAGR \$501 2012 2013 2014 2015 2016



**15% CAGR** 

Free Cash Flow<sup>(3)</sup>



TSR Since IPO<sup>(1)</sup>: COMM: +98%; S&P 500: +55%; Peers: +29%

\$882

2017

(1) Total Shareholder Return (TSR) as of close on June 1, 2018

(2) See appendix for reconciliation of non-GAAP measures

46 (3) Free Cash Flow is Cash from Operations less Capital Expenditures

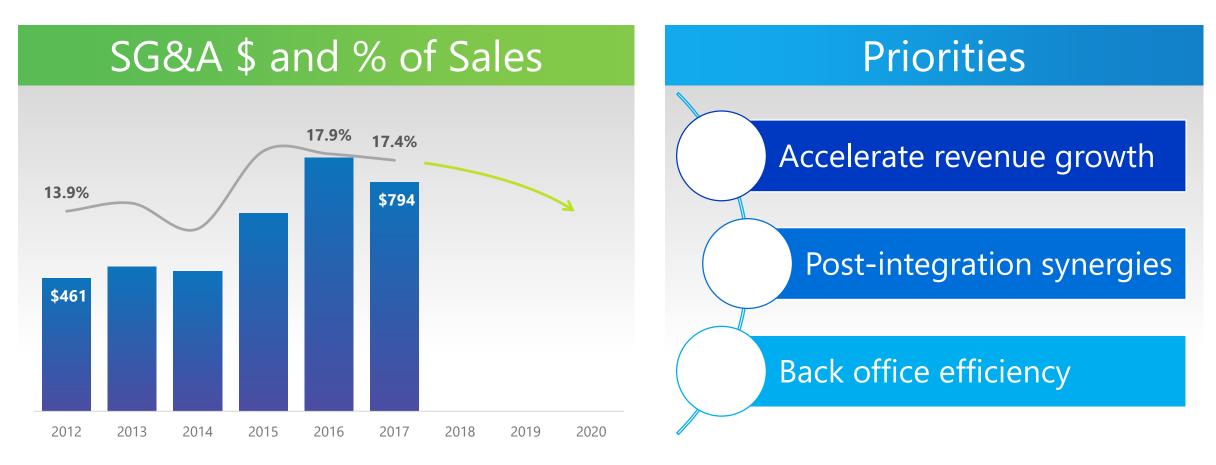
## Gross Margin Dynamics



Focus on gross margin *dollars*, which creates bottom line value

## **Operating Expense Reduction**

(Dollars in millions)



## Themes Looking Ahead

# Key Revenue Considerations

- FirstNet
- Hyperscale traction
- Deep fiber builds

- Enterprise dynamics
- Customer M&A
- International markets
- Near-term margins impacted by pricing
- Expect margin pressure to be substantially offset in 2019 by incremental cost reductions

### **Earnings Growth**

**Gross Margin** 

• Expect > 10% adjusted EPS growth in 2018`

#### **Generate Strong Cash Flow from Operations**

## Strategic Uses of Cash

### CAPITAL ALLOCATION PRIORITIES

Reinvest in the business	<b>Debt reduction</b>	Share buyback
<ul> <li>M&amp;A</li> <li>Annual Capex spend: ~1.5% of revenue</li> <li>Annual R&amp;D spend: ~\$200 million</li> </ul>	<ul> <li>Primary use of cash, absent M&amp;A</li> <li>Current gross / net leverage: 4.7x / 4.3x</li> <li>Supports strategic flexibility</li> </ul>	• Appropriate use of cash, depending on financial flexibility

Expect to generate > \$1.5 billion in cash from operations over next three years

### Growth Assessment

- 1. Drive outsized growth in core markets
- 2. Identify growth opportunities in adjacent markets
- 3. Refine path toward attractive shareholder returns

Focus on accelerating growth prospects organically and inorganically



## Long-Term Financial Targets



### Powering the present. Empowering the future.

### The CommScope Advantage

- 1. Attractive long-term industry growth trends
- 2. Strong global position
- 3. Industry-leading technology
- 4. Operational excellence
- 5. Improving financial profile

## Appendix

#### **Non-GAAP Financial Measures**

CommScope management believes that presenting certain non-GAAP financial measures provides meaningful information to investors in understanding operating results and may enhance investors' ability to analyze financial and business trends. Non-GAAP measures are not a substitute for GAAP measures and should be considered together with the GAAP financial measures. As calculated, our non-GAAP measures may not be comparable to other similarly titled measures of other companies. In addition, CommScope management believes that these non-GAAP financial measures allow investors to compare period to period more easily by excluding items that could have a disproportionately negative or positive impact on results in any particular period.

## Adjusted Operating Income Reconciliation

(Unaudited -- In millions)

	Full Year 2017		Full Year 2016		Full Year 2015		Full Year 2014		Full Year 2013		Full Year 2012	
Operating income, as reported	\$	477.6	\$	574.8	\$	181.6	\$	577.4	\$	329.7	\$	238.2
Amortization of purchased intangible assets		271.0		297.2		220.6		178.3		174.9		175.7
Restructuring costs, net		43.8		42.9		29.5		19.3		22.1		23.0
Equity-based compensation		41.9		35.0		28.7		21.1		16.1		7.5
Asset impairments		-		38.6		90.8		12.1		45.5		40.9
Integration and transaction costs		48.0		62.3		96.9		12.0		27.2		6.3
Purchase accounting adjustments		-		0.6		81.7		(11.9)		2.5		-
Other		-		-		-		-		2.1		9.4
Non-GAAP adjusted operating income	\$	882.3	\$	1,051.4	\$	729.8	\$	808.4	\$	620.1	\$	501.0
Non-GAAP adjusted operating margin %		19.3%		21.4%		19.2%		21.1%		17.8%		15.1%

Components may not sum to total due to rounding See Description of Non-GAAP Financial Measures Adjusted Operating Income Reconciliation by Segment

(Unaudited -- In millions)

#### Year Ended December 31, 2017 Non-GAAP Adjusted Operating Income Reconciliation by Segment

	Solutions		lutions	Total		
Operating income, as reported	\$	242.0	\$ 235.6	\$	477.6	
Amortization of purchased intangible assets		175.5	95.5		271.0	
Restructuring costs, net		36.6	7.2		43.8	
Equity-based compensation		24.4	17.5		41.9	
Integration and transaction costs		47.9	 0.2		48.0	
Non-GAAP adjusted operating income	\$	526.3	\$ 356.0	\$	882.3	
Non-GAAP adjusted operating margin %		18.7%	20.3%		19.3%	

Connectivity

Mobility